IN THE CLAIMS:

All of the pending claims 18-36 are set forth below. The status of each claim is indicated with one of (previously presented), (new), or (cancelled). Please ADD new claims 35 and 36 in accordance with the following:

1-17. (cancelled)

18. (previously presented) A method for configuring a radio interface between a mobile station and a base station of a time-division multiplex mobile radio system for packet data transmission, the method comprising:

defining a transmission from a mobile station to the base station as an uplink direction;

defining a transmission from the base station to a mobile station as a downlink direction;

forming a channel by at least one time slot per time-division multiplex frame, wherein the packet data transmission from a plurality of mobile stations takes place via the channel;

combining frames to form a macroframe;

providing a time slot for signaling at cyclic intervals in the channel; and

allocating, by the base station, one time slot exclusively for signaling in the uplink direction from a respective mobile station in accordance with a predeterminable sequence of the mobile stations, where even if the respective mobile station does not transmit any packet data for the duration of a current and next macroframe, the respective mobile station may transmit in the allocated time slot for signaling.

19. (previously presented) The method as claimed in claim 18, further comprising:

determining a timing advance for the respective mobile station from transmissions by the mobile station in the allocated time slot; and

transmitting the timing advance in a time slot for signaling in the downlink direction to the corresponding mobile station.

20. (previously presented) The method as claimed in claim 18, further comprising:

defining the timing advance and values for a transmission power setting independently of one another.

21. (previously presented) The method as claimed in claim 20, further comprising:

defining, additionally, the timing advance and the values for the transmission power setting from the time slots for packet data transmission.

22. (previously presented) The method as claimed in claim 18, further comprising:

using transmission block types of a predetermined size for specific configuration data in the time slots for signaling in the uplink direction.

23. (previously presented) The method as claimed in claim 18, further comprising:

transmitting configuration data defined in the downlink direction in time slots for packet data transmission.

24. (previously presented) The method as claimed in claim 18, further comprising:

providing, by the base station, the timing advance for the configuration of the radio interface without being controlled by a base station controller.

25. (previously presented) The method as claimed in claim 18, further comprising:

combining a plurality of time slots for signaling to form a signaling block.

26. (previously presented) The method as claimed in claim 25, further comprising:

combining the time slots for signaling in accordance with a sequence which can be predetermined, wherein remaining time slots are provided for an adjacent cell measurement of the mobile station.

27. (previously presented) The method as claimed in claim 18, further comprising:

providing information in time slots for signaling with additional coding.

28. (previously presented) The method as claimed in claim 18, further comprising:

enabling the packet data transmission to take place in both the uplink and downlink directions independently of one another.

29. (previously presented) The method as claimed in claim 18, further comprising: designating, additionally, the mobile stations for packet data transmission by abbreviated identifiers; and allocating, via the time slots for signaling in the downlink direction, one or more time slots for signaling in the uplink direction to the mobile stations by means of indicator messages which contain abbreviated identifiers and time slot designations.

30. (previously presented) The method as claimed in claim 18, further comprising:

transmitting, by a mobile station per time slot for signaling in the uplink direction, a self-contained message which contains a reception level of the mobile station.

31. (previously presented) The method as claimed in claim 18, further comprising:

providing transmissions, from the mobile station in the time slots for signaling allocated to it, access blocks having an extended preceding or subsequent guard time, whose transmission time results from a preceding transmission time, a signaled timing advance and an offset value.

32. (previously presented) The method as claimed in claim 31, further comprising:

choosing the offset value such that a range which corresponds to the offset value is greater than the distance which the mobile station can travel between two transmissions for timing advance definitions at a maximum permissible speed.

33. (previously presented) A base station system for configuring a radio interface between a mobile station and a base station of a time-division multiplex mobile radio system for packet data transmission, comprising:

a base station;

a plurality of mobile stations, wherein a transmission from a mobile station to the base station is defined as an uplink direction, and a transmission from the base station to a mobile station is defined as a downlink direction;

a channel formed by at least one time slot per time-division multiplex frame, wherein the packet data transmission from the plurality of mobile stations takes place via the channel;

a macroframe formed from a combination of frames;

a time slot for signaling provided at cyclic intervals in the channel; and a control device to allocate time slots to the plurality of mobile stations, wherein just one time slot for signaling in the uplink direction is allocated exclusively to a respective mobile station according to a predeterminable sequence of the mobile stations, the allocation being independent of any packet data transmission so that the mobile station may transmit in the time slot allocated for signaling even if the mobile station does not transmit any packet data for the duration of a current and next macroframe.

34. (previously presented) The base station system as claimed in claim 33, wherein timing advances for the mobile stations are transmitted as configuration data for the plurality of mobile stations in a time slot for signaling in the downlink direction.

35. (new) A method for configuring a radio interface between a mobile station and a base station of a time-division multiplex mobile radio system for packet data transmission, the method comprising:

defining a transmission from a mobile station to the base station as an uplink direction;

defining a transmission from the base station to a mobile station as a downlink direction;

forming a channel by at least one time slot per time-division multiplex frame, wherein the packet data transmission from a plurality of mobile stations takes place via the channel;

combining frames to form a macroframe;

providing a time slot for signaling at cyclic intervals in the channel; and

allocating, by the base station, one time slot exclusively for signaling in the uplink direction from a respective mobile station in accordance with a predeterminable sequence of the mobile stations, where even if the respective mobile station does not transmit any packet data for the duration of a current and next macroframe, the respective mobile station transmits in the allocated time slot for signaling.

36. (new) A base station system for configuring a radio interface between a mobile station and a base station of a time-division multiplex mobile radio system for packet data transmission, comprising:

a base station;

a plurality of mobile stations, wherein a transmission from a mobile station to the base station is defined as an uplink direction, and a transmission from the base station to a mobile station is defined as a downlink direction;

a channel formed by at least one time slot per time-division multiplex frame, wherein the packet data transmission from the plurality of mobile stations takes place via the channel;

a macroframe formed from a combination of frames;

a time slot for signaling provided at cyclic intervals in the channel; and a control device to allocate time slots to the plurality of mobile stations, wherein just one time slot for signaling in the uplink direction is allocated exclusively to a respective mobile station according to a predeterminable sequence of the mobile stations, the allocation being independent of any packet data transmission so that the mobile station transmits in the time slot allocated for signaling even if the mobile station does not transmit any packet data for the duration of a current and next macroframe.